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NONAQUEOUS ELECTROLYTE SECONDARY BATTERY

Abstract:

PROBLEM TO BE SOLVED: To improve cycle characteristics, by suppressing degradation of a nonaqueous electrolyte caused by decomposition of a solvent in a nonaqueous electrolyte secondary battery.

SOLUTION: A nonaqueous electrolyte contains a specific chain ether expressed by a chemical formula, $C_nF_{2n+1}-O-C_mH_{2m+1}$ (where, n is 1 to 5 and m is 1 to 4). In this battery, the nonaqueous electrolyte having the chain ether added thereto is used and the reduction of its discharge capacity arising during

charge/discharge cycles is suppressed. In other words, the contact of a negative electrode with solvent molecules is eliminated by forming stable coatings of good quality on surfaces of the negative electrode owing to the addition of the chain ether, and therefore a solvent is stabilized, that is, the degradation of the nonaqueous electrolyte is prevented.

